	U	1	Document ID	Issue Date	Pages
1	☐	☒	US 5958367 A	19990928	52
2	☐	☒	WO 9818884 A2	19980507	34
3	☐	☒	WO 9815500 A	19980505	120
4	☐	☒	WO 9631434 A	19961010	53

	Title	Current OR	Current XRef
1	Methods for preparing porous metal oxides	423/701	423/702; 423/703; 423/704; 423/705; 423/706; 423/707; 423/708; 423/713
2	NANOSTRUCTURED AQUEOUS FUELS		
3	Stable, hexagonally packed, mesoporous metal oxide molecular sieves - have a well defined structure, are resistant to pore collapse on removal of the templating molecule and are thermally stable		
4	Prodn. of hexagonally packed mesoporous metal oxide(s) for e.g. catalysts - where the mesostructures are resistant to pore collapse after removal of surfactants and are thermally stable		

	Retrieval Classif	Inventor	S	C	P	2	3	4	5
1		Ying, Jackie Y. et al.	☒	☐	☐	☐	☐	☐	☐
2		YING, JACKIE Y et al.	☒	☐	☐	☐	☐	☐	☐
3		ANTONELLI, D M et al.	☒	☐	☐	☐	☐	☐	☐
4		ANTONELLI, D M et al.	☒	☐	☐	☐	☐	☐	☐

	Image Doc. Displayed	PT
1	US 5958367	☐
2	WO 9818884 A2	☐
3	WO 9815500 A1	☐
4	WO 9631434 A1	☐

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=> d

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2002 ACS
RN   12254-17-0  REGISTRY
CN   Aluminum barium oxide (Al12BaO19) (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Aluminate (Al12O192-), barium (1:1)
CN   Aluminum barium oxide (BaAl12O19) (8CI)
CN   Barium aluminate (BaAl12O19) (6CI, 7CI)
OTHER NAMES:
CN   Barium aluminum oxide (BaAl12O19)
CN   Barium hexaaluminate
CN   Barium hexaaluminate (BaAl12O19)
DR   259686-57-2
MF   Al . Ba . O
AF   Al12 Ba O19
CI   TIS
LC   STN Files:   CA, CAOLD, CAPLUS, CEN, IFICDB, IFIPAT, IFIUDB, PROMT,
       TOXCENTER, USPAT2, USPATFULL

  Component    |       Ratio        |     Component
               |                    |  Registry Number
=============+====================+==================
O              |         19         |      17778-80-2
Ba             |         1          |       7440-39-3
Al             |         12         |       7429-90-5

             265 REFERENCES IN FILE CA (1962 TO DATE)
              25 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             266 REFERENCES IN FILE CAPLUS (1962 TO DATE)
              11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)


=> d his

     (FILE 'HOME' ENTERED AT 12:59:12 ON 20 DEC 2002)

     FILE 'REGISTRY' ENTERED AT 12:59:19 ON 20 DEC 2002
L1             1 S BARIUM HEXAALUMINATE

=> s l1
L2           265 L1

=> s nanometer# or millimicron# or micron#
         14775 NANOMETER#
           107 MILLIMICRON#
         14261 MICRON#
L3       28784 NANOMETER# OR MILLIMICRON# OR MICRON#

=> s nm
L4      430888 NM

=> d 1

L4   ANSWER 1 OF 430888  CA  COPYRIGHT 2002 ACS
AN   137:392677  CA
TI   Design and performance of a microchip electrophoresis instrument with
     sensitive variable-wavelength fluorescence detection
AU   Belder, Detlev; Deege, Alfred; Maass, Martin; Ludwig, Martin
CS   Abteilung fur Chromatographie, Max-Planck-Institut fur Kohlenforschung,
```

Mulheim an der Ruhr, D-45470, Germany
SO Electrophoresis (2002), 23(14), 2355-2361
CODEN: ELCTDN; ISSN: 0173-0835
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s l2 and l3
L5 2 L2 AND L3

=> d bib,ab 1-2

L5 ANSWER 1 OF 2 CA COPYRIGHT 2002 ACS
AN 137:81046 CA
TI Synthesis of **nanometer**-sized particles by reverse micelle mediated techniques
IN Ying, Jackie Y.; Zarur, Andrey
PA Massachusetts Institute of Technology, USA
SO U.S., 20 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6413489	B1	20020702	US 1998-60733	19980415
	US 2002110519	A1	20020815	US 2001-993355	20011114
PRAI	US 1997-43321P	P	19970415		
	US 1998-60733	A1	19980415		

AB The present invention relates to a method of producing particles having a particle size of <100 nm and surface areas of at least 20 m2/g where the particles are free from agglomeration. The method involves synthesizing the particles within an emulsion having a 1-40% water content to form reverse micelles. In particular, the particles formed are metal oxide particles. The particles can be used to oxidize hydrocarbons, particularly methane.
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 2 CA COPYRIGHT 2002 ACS
AN 121:137300 CA
TI preparation of heat-resistant BaAl12O19 combustion catalyst by solid-state reaction combined with sub-**micron** grinding
AU Imamura, S.; Ishida, S.; Ebata, E.; Tsurumi, K.; Nishikawa, T.; Tanaka, K.; Koshiga, I.
CS Dep. Chem., Kyoto Inst. Technology, Kyoto, 606, Japan
SO Reaction Kinetics and Catalysis Letters (1994), 52(1), 19-26
CODEN: RKCLAU; ISSN: 0304-4122
DT Journal
LA English
AB Heat-resistant barium hexaaluminate combustion catalyst was prepd. by a conventional solid-state reaction combined with sub-**micron** grinding. The barium hexaaluminate thus prepd. retained almost the same high surface area at high temps. as the one prepd. by the alkoxide method, exhibiting high activity in the catalytic combustion of methane.

```
=> s l2 and l4
L6          17 L2 AND L4

=> s l6 not l5
L7          16 L6 NOT L5

=> d bib,ab

L7   ANSWER 1 OF 16  CA  COPYRIGHT 2002 ACS
AN   136:254318  CA
TI   Vacuum UV-excited composite phosphor emitting persistent-luminance
     luminescence
IN   Arai, Kiyotaka; Tateiwa, Toshiaki; Oki, Yoshiko; Watanabe, Mie
PA   Nichia Chemical Industries Co., Ltd., Japan
SO   Jpn. Kokai Tokkyo Koho, 8 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.         KIND  DATE          APPLICATION NO.   DATE
     ---------------    ----  --------      ---------------   --------
PI   JP 2002080843       A2   20020322      JP 2000-312058    20001012
PRAI JP 2000-199439      A    20000630
AB   The composite phosphor comprises 100 wt. parts of first phosphor grain
     coated with 0.5-100 wt. parts of second phosphor having sp. surface area
     3-50 m2/g, wherein the second phosphor emits light having a peak at
     200-450 nm wave length upon excitation by vacuum UV, and the
     first phosphor emits visible ray upon excitation by vacuum UV or light
     emitted from the second phosphor.  The structure inhibits time-course
     deterioration of luminance of the first phosphor due to the second
     phosphor coating, and the phosphor composite is suitable for use in plasma
     display panels and high load fluorescent lamps, e.g., rare gas elec.
     discharge lamps.


=> d bib,ab 2-17

L7   ANSWER 2 OF 16  CA  COPYRIGHT 2002 ACS
AN   133:108734  CA
TI   Synthesis of barium hexaaluminate phosphors using combinatorial chemistry
AU   Park, Eung Suk; Choi, Yoon Young; Sohn, Kee-Sun; Kim, Chang Hae; Park, Hee
     Dong
CS   Display Phosphor Group, Korea Research Institute of Chemical Technology,
     Teajon, 305-600, S. Korea
SO   Han'guk Seramik Hakhoechi (2000), 37(2), 134-139
     CODEN: HSHAF7
PB   Korean Ceramic Society
DT   Journal
LA   Korean
AB   The main objective of the present investigation is to show the feasibility
     of combinatorial chem. by applying this method to phosphor syntheses.  In
     this respect barium hexaaluminate phosphor was prepd. by the split-pool
     combinatorial method, which enabled much more rapid search of optimum
     compns. of target phosphors than conventional synthetic methods.  Barium
     hexaaluminate phosphors doped with Eu2+ exhibit blue emission while those
     co-doped with Mn2+ and Eu exhibit green emission.  Basically, the phosphor
     doped with 1.3 mol of Ba and 0.06-0.15 mol of Eu2+ exhibit the max. value
     of emission intensity at 435 nm.  Under the UV and VUV
     excitations, the barium hexaaluminate phosphor co-doped with Mn2+ and Eu2+
     shows strong green emission.
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L7 ANSWER 3 OF 16 CA COPYRIGHT 2002 ACS
AN 132:340695 CA
TI Luminance saturation properties of PDP phosphors
AU Okazaki, C.; Shiiki, M.; Suzuki, T.; Suzuki, K.
CS Hitachi Central Research Laboratory, Kokubunji, Tokyo, Japan
SO Journal of Luminescence (2000), 87-89, 1280-1282
CODEN: JLUMA8; ISSN: 0022-2313
PB Elsevier Science B.V.
DT Journal
LA English
AB The authors studied the luminance satn. properties of 5 types of plasma display panel (PDP) phosphors under excitation by an ArF laser (wavelength: 193 **nm**, pulse width: 25 ns, and frequency: 10 Hz). The relation between luminance and excitation energy d. shows that all the phosphors exhibit luminance satn. above an excitation energy d. level of 0.2 mJ/cm2/pulse.
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 16 CA COPYRIGHT 2002 ACS
AN 132:327323 CA
TI Influence of flux on the structure and luminescence of the phosphor BaAl12O19:Mn
AU Hong, Guangyan; Zeng, Xiaoqing; You, Hongpeng; Kim, Chang-hong; Pyun, Chong-hong; Park, Cheol-hee; Yu, Byung-yong; Bal, Hyun-sook; Kwon, Ii-fook
CS Changchun Inst. Applied Chem., Chinese Acad. Sci., Changchun, 130022, Peop. Rep. China
SO Faguang Xuebao (1999), 20(4), 311-315
CODEN: FAXUEW; ISSN: 1000-7032
PB Kexue Chubanshe
DT Journal
LA Chinese
AB The phosphor BaAl12O19:Mn was synthesized by solid state reaction at 1300.degree. under the existence of flux. Its XRD diagram showed the intensity increased with the presence of the flux, the intensity of different crystal planes was changed with the flux, for example, crystal planes (102), (107), (114) and (205) became stronger, while crystal planes (0010) and (304) became weak. The flux not only helped to crystallize the host but also affected on growth of different crystal planes. The UV excitation spectrum consists of 3 bands peaking at 279 **nm**, 360.5 **nm**, 384.6 **nm**, which are due to the 6A1.fwdarw.4A2(4F), 6A1.fwdarw.4E(4D), 6A1.fwdarw.4T2(4D) of Mn2+ transitions, resp. Its photoluminescence spectra showed there is a stronger emission band peaking at 514 **nm** and a weak emission band peaking at 450 **nm**. The former band is assigned to Mn2+-emission, and the latter band may be origin from the host. The emission of Mn2+ ions indicated that Mn2+ ions occupy crystallog. site of Al in tetrahedral. Also the influence of different flux on the luminescent intensity of the phosphor BaAl12O19:Mn varied: H3BO3 decreased its luminescence, AlF3 improved a little and BaF2 improved greatly. The VUV excitation spectrum consists of the bands peaking around 150 **nm** and 195 **nm** that correspond to the host absorption and the 3d5.fwdarw.3d44s1 Mn2++ transition. This result reveals that there is an high efficient energy transfer from the host to the activator. The strong absorption at .apprx.150 **nm** also indicates that the phosphor BaAl12O19:Mn can act as a better candidate of PDP phosphors.

L7 ANSWER 5 OF 16 CA COPYRIGHT 2002 ACS
AN 130:359143 CA

TI Phosphor layer and display device using it
IN Shiigi, Masatoshi; Okazaki, Choichirou; Furukawa, Tadashi
PA Hitachi, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11131059	A2	19990518	JP 1997-298151	19971030

AB The layer contains phosphor particles which generates visible light by excitation of UV light with wavelength .ltoreq.200 **nm** and a material having optical absorption in a certain wavelength (not visible light). The device has the layer and an excitation source for generating UV light with wavelength .ltoreq.200 **nm**. The device gives good images with high contrast.

L7 ANSWER 6 OF 16 CA COPYRIGHT 2002 ACS
AN 127:72431 CA
TI Synthesis and properties of Eu2+ activated blue phosphors
AU Ekambaram, S.; Patil, K. C.
CS Dep. Inorganic and Physical Chem., Indian Institute Science, Bangalore, 560 012, India
SO Journal of Alloys and Compounds (1997), 248(1-2), 7-12
CODEN: JALCEU; ISSN: 0925-8388
PB Elsevier
DT Journal
LA English
AB Blue phosphors Eu2+ activated BaMgAl10O17, BaMg2Al16O27, xBaO.6Al2O3 where x = 0.64-1.8 and LaMgAl11O19 were prepd. by the combustion of corresponding metal nitrates (oxidizer) and carbohydrazide (CH)/diformyl hydrazine (DFH)/urea (fuel) redox mixt. at 400/500.degree. within 5 min. The phosphors were characterized by exposure to UV light, powder XRD, fluorescence and ESR spectroscopy. The phosphors showed a characteristic emission band at .lambda. = 435-462 **nm** when they were excited at 254 **nm**. With an increase in Ba content in xBaO.6Al2O3 (x = 0.64-1.8) the emission band showed a red shift. Addn. of Mn2+ in Eu2+ doped Ba hexa aluminates and Eu2+ doped LaMgAl11O19 resulted in strong green emission at 515 **nm**. The fine particle nature of combustion derived phosphors was studied by powder d. (55-82% of theor. value), particle size (5.7-9.5 .mu.m) and BET surface area (5-22 m2 g-1) measurements.

L7 ANSWER 7 OF 16 CA COPYRIGHT 2002 ACS
AN 126:67211 CA
TI Fluorescent lamps, operating methods and liquid-crystal display apparatus
IN Saito, Miho; Nishimura, Kyoshi; Yuasa, Kunio
PA Toshiba Lighting & Technology, Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08273620	A2	19961018	JP 1995-75615	19950331

AB A cold cathode tubular lamp comprises: a quartz tube contg. Hg and Xe (<200 Torr); an outer and an inner phosphor layer activated by Hg UV (185 and 254 **nm**) and UV < 200 **nm** (Xe 147 and 172 **nm**

), resp.; and means for activating the inner phosphor initially, then increasing the Hg vapor pressure for activating the outer phosphor in leaching to a max. luminescence. The lamp is suitable for use as a backlight in liq. crystal display devices.

L7 ANSWER 8 OF 16 CA COPYRIGHT 2002 ACS
AN 124:327510 CA
TI Study on property of vacuum UV phosphors used in color plasma display panels
AU Gu, Zhiqi; Liang, Yiyong
CS Display Technology Inst., Hangzhou Univ., Hangzhou, 310028, Peop. Rep. China
SO Gongneng Cailiao (1995), 26(Suppl.), 158-9
CODEN: GOCAEA; ISSN: 1001-9731
PB Gongneng Cailiao Bianjibu
DT Journal
LA Chinese
AB The luminescent property, relative luminescent intensity and light decay property of the primary color vacuum UV phosphors (Y,Gd)BO3:Eu (R), BaMgAl14O23:Eu (B), BaAl12O19:Mn (G) excited by 147 **nm** were discussed and the coating properties of three kinds of phosphors in device manufg. were compared. The exptl. results showed that the use of the three phosphors could obtained satisfactory display indexes.

L7 ANSWER 9 OF 16 CA COPYRIGHT 2002 ACS
AN 121:241363 CA
TI color-variable fluorescent lamps
IN Yuasa, Kunio
PA Toshiba Lighting & Technology, Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06076801	A2	19940318	JP 1992-230766	19920831

AB The title lamp, contg. Hg and rare gases, comprises a 1st and a 2nd phosphor layer emitting a 1st and a 2nd colored light via the excitations by the 185 and the 254 **nm** Hg line, resp.; and means for changing the intensity ratio between the 185 and the 254 **nm** line by changing the pulse-duty ratio or the bulb temp. The lamp typically changes the color continuously between greenish and reddish white.

L7 ANSWER 10 OF 16 CA COPYRIGHT 2002 ACS
AN 113:45105 CA
TI Preparation and microstructure of porous hexaaluminate ceramics
AU Machida, Masato; Sirouzu, Masaki; Eguchi, Koichi; Arai, Hiromichi
CS Grad. Sch. Eng. Sci., Kyushu Univ., Kasuga, 816, Japan
SO Nippon Seramikkusu Kyokai Gakujutsu Ronbunshi (1990), 98(6), 554-60
CODEN: NSKRE2; ISSN: 0914-5400
DT Journal
LA Japanese
AB Heat-resistant porous ceramics were prepd. by sintering sol-gel-derived hexaaluminate fine powders at 1200-1600.degree.. Although the sintered samples showed high porosities (50%), the N2 permeability was low because of small pore size (<100 **nm**). The packing of planar particles of hexaaluminate formed 2 kinds of peaks in their pore-size distribution at <10 **nm** and 100 **nm**. Second-stage sintering of the crushed powders significantly enhanced the N2 permeability. In the

samples after 2-stage sintering, the loose packing of large agglomerates formed macropores (>10 .mu.m) besides the voids of primary particles. The macroprobes are effective for high gas permeation. Consequently, the 2nd-step sintering of hexaaluminate gave a mixed structure of micropores and macropores, which is a possible microstructure for application to filtration catalysts.

L7 ANSWER 11 OF 16 CA COPYRIGHT 2002 ACS
AN 103:150695 CA
TI Fluorescent lamp
PA Toshiba Corp., Japan
SO Jpn. Tokkyo Koho, 5 pp.
CODEN: JAXXAD
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60024151	B4	19850611	JP 1976-31359	19760324

AB A fluorescent lamp is obtained by coating the inner walls of a discharge tube with a mixt. of a Eu-activated rare earth oxysulfide phosphor emitting in the red (600-640 **nm**), a Tb-activated rare earth oxysulfide phosphor emitting in the yellow-green (530-570 **nm**), and a Tm-activated rare earth oxysulfide phosphor emitting in the blue (430-480 **nm**) region. The blue-emitting component may be Sr halophosphate:Eu or Ba aluminate:Eu. White light-emitting fluorescent lamps are obtained by mixing red-, green-, and blue-emitting phosphors. When using RE2O2S:Eu [RE = rare earth) as the red-emitting phosphor and RE2O2S:Tb as the green-emitting phosphor, a white light-emitting fluorescent lamp with high color rendition and efficiency is obtained.

L7 ANSWER 12 OF 16 CA COPYRIGHT 2002 ACS
AN 93:15928 CA
TI Refractive index and optical absorption of barium hexaaluminate BaAl12O19
AU Enke, K.; Mateika, D.
CS Forschungslab., Philips G.m.b.H., Hamburg, D-2000/54, Fed. Rep. Ger.
SO Journal of Materials Science (1980), 15(4), 1066-7
CODEN: JMTSAS; ISSN: 0022-2461
DT Journal
LA English
AB Optical absorption and n measurements on Ba1-xAl12+(2/3)xO19 (x = 0.1-0.2) single crystals showed a very high band gap (E2 .apprxeq.6.1eV according to .lambda.g .apprxeq.205 **nm**), whereas the n and the dispersion as well are rather low. Birefringence measurements were carried out in the visible region with a 100-.mu.m thick sample using conventional ellipsometric methods by means of a Leitz microscope.

L7 ANSWER 13 OF 16 CA COPYRIGHT 2002 ACS
AN 91:82024 CA
TI New tricolor phosphors for gas discharge display
AU Koike, Junro; Kojima, Takehiro; Toyonaga, Ryuya; Kagami, Akiyasu; Hase, Takashi; Inaho, Shuji
CS Tech. Res. Lab., Nippon Hoso Kyokai, Tokyo, Japan
SO Journal of the Electrochemical Society (1979), 126(6), 1008-10
CODEN: JESOAN; ISSN: 0013-4651
DT Journal
LA English
AB The properties of phosphors under vacuum UV excitation were studied to develop tricolor phosphors for use in gas discharge panels to reproduce color TV pictures. The excitation spectra at 100-300 **nm** and the

radiant efficiency of the phosphors incorporated with exptl. gas discharge cells were detd. Based on these results, (Y,Gd)BO3:Eu3+ (red), BaAl12O19:Mn (green), and BaMgAl14O23:Eu2+ (blue) were selected as the new tricolor phosphors which bring high white luminance and wide color gamut to the color picture display panel.

L7 ANSWER 14 OF 16 CA COPYRIGHT 2002 ACS
AN 81:70539 CA
TI Fluorescence in .beta.-aluminum oxide-like materials of potassium, barium, and lanthanum activated with europium(2+) and manganese(2+) ions
AU Tamatani, Masaaki
CS Toshiba Res. Dev. Cent., Tokyo Shibaura Electr. Co., Ltd., Kawasaki, Japan
SO Japanese Journal of Applied Physics (1974), 13(6), 950-6
CODEN: JJAPA5; ISSN: 0021-4922
DT Journal
LA English
AB In-corporation of Mn2+ and Eu2+ ions in .beta.-alumina-like host crystals was studied. Under uv excitation, both BaO.6Al2O3:Eu, Mn, and La2O3.11Al2O3:Eu, Mn show intense green fluorescence caused by the energy transfer from Eu2+ to Mn2+. The efficiency of the luminescence is comparable to that of Zn2SiO4:Mn when excited by 254 **nm** light. Emission and excitation spectra of the phosphors were compared with those of KAl11O17. The difference in the at. packing in the mirror plane of these aluminates appears to be reflected in the emission spectra of Mn2+. The quenching temp. for the sensitized fluorescence of Mn2+ is governed by the Eu2+ ions, replacing mono-, di-, or tri-valent large cations in these compds.

L7 ANSWER 15 OF 16 CA COPYRIGHT 2002 ACS
AN 81:70533 CA
TI Depreciation of .beta.-aluminum oxide-like phosphors under ultraviolet irradiation
AU Tamatani, Masaaki
CS Toshiba Res. Dev. Cent., Tokyo Shibaura Electric Co., Ltd., Kawasaki, Japan
SO Japanese Journal of Applied Physics (1974), 13(6), 957-65
CODEN: JJAPA5; ISSN: 0021-4922
DT Journal
LA English
AB The effects of uv irradn. on the photoluminescence intensity of the .beta.-alumina-like phosphors were investigated. The 185 **nm** irradn. produces a broad absorption band, due to color centers, in the uv region. Decrease in the fluorescence intensity of both BaO.6Al2O3:Eu, Mn, and La2O3.11Al2O3:Eu, Mn is attributed to the absorption of part of the excitation energy by the color centers. The irreversible photoionization of Eu2+ to Eu3+ ions is responsible for the depreciation of KAl11O17:Eu without color center formation under the 254 **nm** irradn. Most of the depreciation can be interpreted solely in terms of the induced redn. of Eu2+ absorption bands in the uv region. In KAl11O17:Eu, Mn, the 254 **nm** irradn. causes depreciation due to the nonradiative decay of the Mn2+ excited states, in addn. to that due to the photoionization of Eu2+. Diffusion of ions and/or vacancies may participate in the irreversible photoionization.

L7 ANSWER 16 OF 16 CA COPYRIGHT 2002 ACS
AN 73:104217 CA
TI Luminescent materials
PA Philips Electronic and Associated Industries Ltd.
SO Brit., 6 pp.
CODEN: BRXXAA

DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1190520		19700506		
PRAI	NL		19671122		

AB For many photochem. document-copying systems, a paper is required which is sensitive to the transmitted, or reflected radiation used. A further requirement is that the sensitivity is to uv rather than visible wavelength radiation. The majority of such systems use a Hg vapor discharge lamp including a luminescent layer provided on a support, the function of which is to convert the low wavelength radiation to 380-440 **nm**. The patent describes a luminescent material of formula BaxSryCazEupAl12O19 where x + y + z + p = 1; 1 or 2 of the parameters x, y, and z may equal zero and 0.1 .gtoreq. 0.001. Ba1-pEupAl12O19 (I) has the highest conversion efficiency, the best temp. dependence and a max. emissivity at the longest wavelength (435 **nm**). I is satisfactorily excited by the 365- as well as the 254-**nm**. Hg line. Only slight effects of oxidn. have been noted. TiO2 may be used as a reflecting layer between the support and the luminescent material. Eight examples are given; for each, radiation intensity curves with both wavelength and temp. are drawn.